

# Work Order ID 144595

April 21, 2016 2:06:23 PM

**\*144595\***

Page 1

Item ID: D5155-11

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Co-Pilot Collective Head (212)

Start Date: 5/2/2016 Start Qty: 12.00

**\*12\***

Cust Item ID:

Required Date: 5/13/2016 Req'd Qty: 12.00

**\*12\***

Customer:

Reference:

Approvals: Process Plan: MCS Date: APR 21 2016

Tooling:

Date:

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D5155

B

100

Cut blanks as per folio

0.00

**\*100\***

Bandsaw

Memo

0.00

Jeaspa Bandsaw

CUT BLANK AT 4.900"

DAS  
14

9-53

16/05/10

110

0.00

**\*110\***

HAAS 5AXIS

Memo

0.00

HAAS CNC vertical machine #5

MACHINE AS PER DWG & FOLIO FB349/ D5155-11

FOLIO REV: BA

DWG REV: B

\*\*\*DO NOT BUFF OR POLISH PART\*\*\*

DEBURR

DAS  
14

9-53

16/05/11

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube <input type="checkbox"/></td> <td style="border: none;">Cross tube <input type="checkbox"/></td> <td style="border: none;">Water Jet <input type="checkbox"/></td> <td style="border: none;">Engineering <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Machining <input type="checkbox"/></td> <td style="border: none;">Small Fab <input type="checkbox"/></td> <td style="border: none;">Prod. Eng. Coord. <input type="checkbox"/></td> <td style="border: none;">Quality <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Thermoforming <input type="checkbox"/></td> <td style="border: none;">Finishing <input type="checkbox"/></td> <td style="border: none;">Rec/Store/Packaging <input type="checkbox"/></td> <td style="border: none;">Other <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Large Fab <input type="checkbox"/></td> <td style="border: none;">Composite <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                               |                                              |                                   | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/>   | Water Jet <input type="checkbox"/>     | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/>    | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>      | Finishing <input type="checkbox"/>        | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>   | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/>           | Supplier <input type="checkbox"/>   |                                              |                                           |                                                |                                        |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                              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| Skid-tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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                                               | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Machining <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| Thermoforming <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                                               | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Large Fab <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| <b>Root Cause</b><br><table style="width: 100%; border: none;"> <tr> <td style="border: none;">Environment <input type="checkbox"/></td> <td style="border: none;">No Re-verification <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Design <input type="checkbox"/></td> <td style="border: none;">Operator <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Doc/Data <input type="checkbox"/></td> <td style="border: none;">Offset/Setup <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Equip/Tooling <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Handling/Pre <input type="checkbox"/></td> <td style="border: none;">Training <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Material <input type="checkbox"/></td> <td style="border: none;">Use for Testing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Internal Transport <input type="checkbox"/></td> <td style="border: none;">Poor Information <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Tribal Knowledge <input type="checkbox"/></td> <td style="border: none;">Rushing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">LOA <input type="checkbox"/></td> <td style="border: none;">Product Improvement <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Substation <input type="checkbox"/></td> <td style="border: none;">Process Improvement <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Past Expiry Date <input type="checkbox"/></td> <td style="border: none;">Manufacturing Process <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Misidentified <input type="checkbox"/></td> <td style="border: none;">Past Due <input type="checkbox"/></td> </tr> </table> |                                                                                                                                                                                    | Environment <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No Re-verification <input type="checkbox"/>   | Design <input type="checkbox"/>              | Operator <input type="checkbox"/> | Doc/Data <input type="checkbox"/>  | Offset/Setup <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/>    | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/>  | Material <input type="checkbox"/>          | Use for Testing <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/>    | Rushing <input type="checkbox"/> | LOA <input type="checkbox"/>       | Product Improvement <input type="checkbox"/> | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> | Misidentified <input type="checkbox"/> | Past Due <input type="checkbox"/> | <b>FAULT CATEGORY</b><br><table style="width: 100%; border: none;"> <tr> <td style="border: none;">Pressure/Forced <input type="checkbox"/></td> <td style="border: none;">Temperature/Cure <input type="checkbox"/></td> <td style="border: none;">Power Loss/Surge <input type="checkbox"/></td> <td style="border: none;">Positioned Wrong <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Bending <input type="checkbox"/></td> <td style="border: none;">Set-up <input type="checkbox"/></td> <td style="border: none;">Folio/Program <input type="checkbox"/></td> <td style="border: none;">Outside Dimensions <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Centre Not Concentric <input type="checkbox"/></td> <td style="border: none;">BOM/Route <input type="checkbox"/></td> <td style="border: none;">Grain <input type="checkbox"/></td> <td style="border: none;">Over/Under tolerance <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Cracks <input type="checkbox"/></td> <td style="border: none;">Broken/Damage/Defect <input type="checkbox"/></td> <td style="border: none;">Weld <input type="checkbox"/></td> <td style="border: none;">Part Incorrect <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Crimp/Kink/Ripple/Wave <input type="checkbox"/></td> <td style="border: none;">Inspection Incomplete/Unqualified <input type="checkbox"/></td> <td style="border: none;">Wrong Stock Pulled <input type="checkbox"/></td> <td style="border: none;">Part Lost/Missing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Cuffs <input type="checkbox"/></td> <td style="border: none;">Contamination <input type="checkbox"/></td> <td style="border: none;">Out of Sequence <input type="checkbox"/></td> <td style="border: none;">Part Moved <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Crushing <input type="checkbox"/></td> <td style="border: none;">Countersink <input type="checkbox"/></td> <td style="border: none;">Off-set <input type="checkbox"/></td> <td style="border: none;">Drawing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Heat Treat <input type="checkbox"/></td> <td style="border: none;">Cut Too Short <input type="checkbox"/></td> <td style="border: none;">Mislabeled <input type="checkbox"/></td> <td style="border: none;">Finish <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Wave/Twist in Tube <input type="checkbox"/></td> <td style="border: none;">Instructions Incomplete/Unclear <input type="checkbox"/></td> <td style="border: none;">Fit/Function <input type="checkbox"/></td> <td style="border: none;">Misread <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Marks/Chatter <input type="checkbox"/></td> <td style="border: none;">Drill Holes <input type="checkbox"/></td> <td style="border: none;">Misaligned/off center <input type="checkbox"/></td> <td style="border: none;">Turning Sequence <input type="checkbox"/></td> </tr> </table> |  |  | Pressure/Forced <input type="checkbox"/> | Temperature/Cure <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/> | Positioned Wrong <input type="checkbox"/> | Bending <input type="checkbox"/> | Set-up <input type="checkbox"/> | Folio/Program <input type="checkbox"/> | Outside Dimensions <input type="checkbox"/> | Centre Not Concentric <input type="checkbox"/> | BOM/Route <input type="checkbox"/> | Grain <input type="checkbox"/> | Over/Under tolerance <input type="checkbox"/> | Cracks <input type="checkbox"/> | Broken/Damage/Defect <input type="checkbox"/> | Weld <input type="checkbox"/> | Part Incorrect <input type="checkbox"/> | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/> | Cuffs <input type="checkbox"/> | Contamination <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Part Moved <input type="checkbox"/> | Crushing <input type="checkbox"/> | Countersink <input type="checkbox"/> | Off-set <input type="checkbox"/> | Drawing <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Finish <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Misread <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/> |
| Environment <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| Material <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Pressure/Forced <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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                                               | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| Bending <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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                                               | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| Centre Not Concentric <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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                                               | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| Cracks <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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                                               | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| Cuffs <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| Crushing <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Heat Treat <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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| Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Marks/Chatter <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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April 21, 2016 2:06:23 PM

Page 2

**Accept**

**Setup Start \*NS1\***

Stop \*NS2\*

**Cust Item ID:**

**Start Date:** 5/2/2016      **Start Qty:** 12.00      **\*12\***

**Required Date:** 5/13/2016      **Req'd Qty:** 12.00      **\*12\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

**Stop** **\*NR2\***

### Operation Description

### Set Up/ Run Hours

| Tool ID | Tool # | Plan Code |
|---------|--------|-----------|
|---------|--------|-----------|

| Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|------------|------------|---------------|-------------|
|            |            |               |             |

120

QC1- Inspection performed by CMM

0.00

**\*120\***

0.00

QC

## Quality Control

## Memo

Inspect on CMM as per folio CMMA033.

DWG REV:

~~CMM~~ PROG. REV:

130

QC8- Inspect parts - second check

0.00

**\*130\***

0.00

QC

## Quality Control

## Memo

140

QC5- Inspect part completeness to step on W/O

0.00

**\*140\***

0.00

OC

### Quality Control

## Memo

DAS  
14  
0.00  
16/05/11

B.e 16/05/12

**DAS**  
**08**  
**9-89**

DAS  
38  
9-88  
MAY 12 2015

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                   |                                              |  |
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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |  |  |                                                                                                                   |                                              |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | <b>MRB (QSI042) Approval</b><br><br><div style="border: 1px solid black; height: 150px; margin-top: 10px;"></div> |                                              |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |                                                                                                                   |                                              |  |
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| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>             Environment <input type="checkbox"/><br/>             Design <input type="checkbox"/><br/>             Doc/Data <input type="checkbox"/><br/>             Equip/Tooling <input type="checkbox"/><br/>             Handling/Pre <input type="checkbox"/><br/>             Material <input type="checkbox"/><br/>             Internal Transport <input type="checkbox"/><br/>             Tribal Knowledge <input type="checkbox"/><br/>             LOA <input type="checkbox"/><br/>             Substation <input type="checkbox"/><br/>             Past Expiry Date <input type="checkbox"/><br/>             Misidentified <input type="checkbox"/> </div> <div>             No Re-verification <input type="checkbox"/><br/>             Operator <input type="checkbox"/><br/>             Offset/Setup <input type="checkbox"/><br/>             Supplier <input type="checkbox"/><br/>             Training <input type="checkbox"/><br/>             Use for Testing <input type="checkbox"/><br/>             Poor Information <input type="checkbox"/><br/>             Rushing <input type="checkbox"/><br/>             Product Improvement <input type="checkbox"/><br/>             Process Improvement <input type="checkbox"/><br/>             Manufacturing Process <input type="checkbox"/><br/>             Past Due <input type="checkbox"/> </div> </div> |  | <b>FAULT CATEGORY</b><br><div style="display: flex; justify-content: space-between;"> <div>             Pressure/Forced <input type="checkbox"/><br/>             Bending <input type="checkbox"/><br/>             Centre Not Concentric <input type="checkbox"/><br/>             Cracks <input type="checkbox"/><br/>             Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>             Cuffs <input type="checkbox"/><br/>             Crushing <input type="checkbox"/><br/>             Heat Treat <input type="checkbox"/><br/>             Wave/Twist in Tube <input type="checkbox"/><br/>             Marks/Chatter <input type="checkbox"/> </div> <div>             Temperature/Cure <input type="checkbox"/><br/>             Set-up <input type="checkbox"/><br/>             BOM/Route <input type="checkbox"/><br/>             Broken/Damage/Defect <input type="checkbox"/><br/>             Inspection Incomplete/Unqualified <input type="checkbox"/><br/>             Contamination <input type="checkbox"/><br/>             Countersink <input type="checkbox"/><br/>             Cut Too Short <input type="checkbox"/><br/>             Instructions Incomplete/Unclear <input type="checkbox"/><br/>             Drill Holes <input type="checkbox"/> </div> <div>             Power Loss/Surge <input type="checkbox"/><br/>             Folio/Program <input type="checkbox"/><br/>             Grain <input type="checkbox"/><br/>             Weld <input type="checkbox"/><br/>             Wrong Stock Pulled <input type="checkbox"/><br/>             Out of Sequence <input type="checkbox"/><br/>             Off-set <input type="checkbox"/><br/>             Misabeled <input type="checkbox"/><br/>             Fit/Function <input type="checkbox"/><br/>             Misaligned/off center <input type="checkbox"/> </div> <div>             Positioned Wrong <input type="checkbox"/><br/>             Outside Dimensions <input type="checkbox"/><br/>             Over/Under tolerance <input type="checkbox"/><br/>             Part Incorrect <input type="checkbox"/><br/>             Part Lost/Missing <input type="checkbox"/><br/>             Part Moved <input type="checkbox"/><br/>             Drawing <input type="checkbox"/><br/>             Finish <input type="checkbox"/><br/>             Misread <input type="checkbox"/><br/>             Turning Sequence <input type="checkbox"/> </div> </div> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                   |                                              |  |
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April 21, 2016 2:06:23 PM

Page 3

**Reference:**

Stop **\*NR2\***

[illegible]

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       |  |
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| <b>Root Cause</b><br><div style="display: flex;"> <div style="flex: 1;">             Environment <input type="checkbox"/><br/>             Design <input type="checkbox"/><br/>             Doc/Data <input type="checkbox"/><br/>             Equip/Tooling <input type="checkbox"/><br/>             Handling/Pre <input type="checkbox"/><br/>             Material <input type="checkbox"/><br/>             Internal Transport <input type="checkbox"/><br/>             Tribal Knowledge <input type="checkbox"/><br/>             LOA <input type="checkbox"/><br/>             Substation <input type="checkbox"/><br/>             Past Expiry Date <input type="checkbox"/><br/>             Misidentified <input type="checkbox"/> </div> <div style="flex: 1;">             No Re-verification <input type="checkbox"/><br/>             Operator <input type="checkbox"/><br/>             Offset/Setup <input type="checkbox"/><br/>             Supplier <input type="checkbox"/><br/>             Training <input 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type="checkbox"/><br/>             Heat Treat <input type="checkbox"/><br/>             Wave/Twist in Tube <input type="checkbox"/><br/>             Marks/Chatter <input type="checkbox"/> </div> <div style="flex: 1;">             Temperature/Cure <input type="checkbox"/><br/>             Set-up <input type="checkbox"/><br/>             BOM/Route <input type="checkbox"/><br/>             Broken/Damage/Defect <input type="checkbox"/><br/>             Inspection Incomplete/Unqualified <input type="checkbox"/><br/>             Contamination <input type="checkbox"/><br/>             Countersink <input type="checkbox"/><br/>             Cut Too Short <input type="checkbox"/><br/>             Instructions Incomplete/Unclear <input type="checkbox"/><br/>             Drill Holes <input type="checkbox"/> </div> <div style="flex: 1;">             Power Loss/Surge <input type="checkbox"/><br/>             Folio/Program <input type="checkbox"/><br/>             Grain <input type="checkbox"/><br/>   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**Work Order ID 144595**

April 21, 2016 2:06:23 PM

**\*144595\***

Page 4

Item ID: D5155-11

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Co-Pilot Collective Head (212)

Start Date: 5/2/2016 Start Qty: 12.00

**\*12\***

Cust Item ID:

Required Date: 5/13/2016 Req'd Qty: 12.00

**\*12\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                           | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp               |
|--------------------------------|----------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|------------------------------|
| 160                            | Identify as per dwg & Stock Location: <u>S1375</u> | 0.00                 |         |        |              | <u>8</u>      |               |                  |                              |
| <b>*160*</b>                   |                                                    |                      |         |        |              |               |               |                  |                              |
| Packaging                      | Memo                                               | 0.00                 |         |        |              |               |               |                  |                              |
| Packaging                      |                                                    |                      |         |        |              |               |               |                  |                              |
|                                |                                                    |                      |         |        |              |               |               |                  | DAS<br>6 MAY 25 2016<br>9-89 |
| 170                            | QC21- Final Inspection - Work Order Release        | 0.00                 |         |        |              |               |               |                  |                              |
| <b>*170*</b>                   |                                                    |                      |         |        |              |               |               |                  |                              |
| QC                             | Memo                                               | 0.00                 |         |        |              |               |               |                  |                              |
| Quality Control                |                                                    |                      |         |        |              |               |               |                  |                              |

MCS MAY 25 2016

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube <input type="checkbox"/></td> <td style="border: none;">Cross tube <input type="checkbox"/></td> <td style="border: none;">Water Jet <input type="checkbox"/></td> <td style="border: none;">Engineering <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Machining <input type="checkbox"/></td> <td style="border: none;">Small Fab <input type="checkbox"/></td> <td style="border: none;">Prod. Eng. Coord. <input type="checkbox"/></td> <td style="border: none;">Quality <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Thermoforming <input type="checkbox"/></td> <td style="border: none;">Finishing <input type="checkbox"/></td> <td style="border: none;">Rec/Store/Packaging <input type="checkbox"/></td> <td style="border: none;">Other <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Large Fab <input type="checkbox"/></td> <td style="border: none;">Composite <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                               |                                                 |                                   | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/>   | Water Jet <input type="checkbox"/>     | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/>    | Small Fab <input type="checkbox"/> | Prod. 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Coord. <input type="checkbox"/> | Quality <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>      | Finishing <input type="checkbox"/>        | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>   | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/>           | Supplier <input type="checkbox"/>   |                                              |                                           |                                                |                                        |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                              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| <b>Root Cause</b><br><table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment <input type="checkbox"/></td> <td style="border: none;">No Re-verification <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Design <input type="checkbox"/></td> <td style="border: none;">Operator <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Doc/Data <input type="checkbox"/></td> <td style="border: none;">Offset/Setup <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Equip/Tooling <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Handling/Pre <input type="checkbox"/></td> <td style="border: none;">Training <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Material <input type="checkbox"/></td> <td style="border: none;">Use for Testing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Internal Transport <input type="checkbox"/></td> <td style="border: none;">Poor Information <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Tribal Knowledge <input type="checkbox"/></td> <td style="border: none;">Rushing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">LOA <input type="checkbox"/></td> <td style="border: none;">Product Improvement <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Substation <input type="checkbox"/></td> <td style="border: none;">Process Improvement <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Past Expiry Date <input type="checkbox"/></td> <td style="border: none;">Manufacturing Process <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Misidentified <input type="checkbox"/></td> <td style="border: none;">Past Due <input type="checkbox"/></td> </tr> </table> |                                                                                                                                                                                    | Environment <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No Re-verification <input type="checkbox"/>   | Design <input type="checkbox"/>                 | Operator <input type="checkbox"/> | Doc/Data <input type="checkbox"/>  | Offset/Setup <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/>    | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/>  | Material <input type="checkbox"/>          | Use for Testing <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/>    | Rushing <input type="checkbox"/> | LOA <input type="checkbox"/>       | Product Improvement <input type="checkbox"/> | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> | Misidentified <input type="checkbox"/> | Past Due <input type="checkbox"/> | <b>FAULT CATEGORY</b><br><table style="width:100%; 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| Handling/Pre <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| Material <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Internal Transport <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Tribal Knowledge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| LOA <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| Substation <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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| Past Expiry Date <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| Misidentified <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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| Pressure/Forced <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| Bending <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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| Centre Not Concentric <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| Cracks <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| Cuffs <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| Crushing <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Heat Treat <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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                                    |                                |                                        |                                          |                                     |                                   |                                      |                                  |                                  |                                     |                                        |                                     |                                 |                                             |                                                          |                                       |                                  |                                        |                                      |                                                |                                           |
| Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Instructions Incomplete/Unclear <input type="checkbox"/>                                                                                                                           | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Misread <input type="checkbox"/>              |                                                 |                                   |                                    |                                       |                                        |                                      |                                       |                                    |                                            |                                          |                                             |                                           |                                              |                                  |                                    |                                              |                                     |                                              |  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| Marks/Chatter <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Drill Holes <input type="checkbox"/>                                                                                                                                               | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Turning Sequence <input type="checkbox"/>     |                                                 |                                   |                                    |                                       |                                        |                                      |                                       |                                    |                                            |                                          |                                             |                                           |                                              |                                  |                                    |                                              |                                     |                                              |  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# Picklist Print

April 21, 2016 2:06:22 PM

Page 1

Work Order ID: 144595

**\*144595\***

Parent Item: D5155-11

**\*D5155-11\***

Parent Item Name: Co-Pilot Collective Head (212)

Start Date: 5/2/2016

Required Date: 5/13/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV.A NEW ISSUE JFS 15/01/14 VERIFIED BY: JLM IPP REV:B  
15.07.02 AS PER DWG REV.B DD VERF:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M6061T6B2.500X03.50<br>0        |                        | Purchased     |             | No                  |                  | 100             | f                  | 13.0090        | 0.409       | 5.166316     |               |                |        |

**\*M6061T6B2 500X03 500\***

**\*\***

6061-T6 Bar 2.50 x 3.50

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| MAT004          | 13.009         |                 |
| m132772         | 0.3827         |                 |
| m133265         | 0.6263         |                 |
| — m134158       | 12             |                 |

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
3.5

*OK 16/05/10*

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                                 |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------|-------------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |  |  |                       |                                                 |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | MRB (QSI042) Approval |                                                 |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |                       | Completed By                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       | Lead hand / Supervisor<br>Approval Verification |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       | QC / QA Coordinator<br>Approval                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                                 |  |
| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>             Environment <input type="checkbox"/><br/>             Design <input type="checkbox"/><br/>             Doc/Data <input type="checkbox"/><br/>             Equip/Tooling <input type="checkbox"/><br/>             Handling/Pre <input type="checkbox"/><br/>             Material <input type="checkbox"/><br/>             Internal Transport <input type="checkbox"/><br/>             Tribal Knowledge <input type="checkbox"/><br/>             LOA <input type="checkbox"/><br/>             Substation <input type="checkbox"/><br/>             Past Expiry Date <input type="checkbox"/><br/>             Misidentified <input type="checkbox"/> </div> <div>             No Re-verification <input type="checkbox"/><br/>             Operator <input type="checkbox"/><br/>             Offset/Setup <input type="checkbox"/><br/>             Supplier <input type="checkbox"/><br/>             Training <input type="checkbox"/><br/>             Use for Testing <input type="checkbox"/><br/>             Poor Information <input type="checkbox"/><br/>             Rushing <input type="checkbox"/><br/>             Product Improvement <input type="checkbox"/><br/>             Process Improvement <input type="checkbox"/><br/>             Manufacturing Process <input type="checkbox"/><br/>             Past Due <input type="checkbox"/> </div> </div> |  | <b>FAULT CATEGORY</b><br><div style="display: flex; justify-content: space-between;"> <div>             Pressure/Forced <input type="checkbox"/><br/>             Bending <input type="checkbox"/><br/>             Centre Not Concentric <input type="checkbox"/><br/>             Cracks <input type="checkbox"/><br/>             Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>             Cuffs <input type="checkbox"/><br/>             Crushing <input type="checkbox"/><br/>             Heat Treat <input type="checkbox"/><br/>             Wave/Twist in Tube <input type="checkbox"/><br/>             Marks/Chatter <input type="checkbox"/> </div> <div>             Temperature/Cure <input type="checkbox"/><br/>             Set-up <input type="checkbox"/><br/>             BOM/Route <input type="checkbox"/><br/>             Broken/Damage/Defect <input type="checkbox"/><br/>             Inspection Incomplete/Unqualified <input type="checkbox"/><br/>             Contamination <input type="checkbox"/><br/>             Countersink <input type="checkbox"/><br/>             Cut Too Short <input type="checkbox"/><br/>             Instructions Incomplete/Unclear <input type="checkbox"/><br/>             Drill Holes <input type="checkbox"/> </div> <div>             Power Loss/Surge <input type="checkbox"/><br/>             Folio/Program <input type="checkbox"/><br/>             Grain <input type="checkbox"/><br/>             Weld <input type="checkbox"/><br/>             Wrong Stock Pulled <input type="checkbox"/><br/>             Out of Sequence <input type="checkbox"/><br/>             Off-set <input type="checkbox"/><br/>             Misabeled <input type="checkbox"/><br/>             Fit/Function <input type="checkbox"/><br/>             Misaligned/off center <input type="checkbox"/> </div> <div>             Positioned Wrong <input type="checkbox"/><br/>             Outside Dimensions <input type="checkbox"/><br/>             Over/Under tolerance <input type="checkbox"/><br/>             Part Incorrect <input type="checkbox"/><br/>             Part Lost/Missing <input type="checkbox"/><br/>             Part Moved <input type="checkbox"/><br/>             Drawing <input type="checkbox"/><br/>             Finish <input type="checkbox"/><br/>             Misread <input type="checkbox"/><br/>             Turning Sequence <input type="checkbox"/> </div> </div> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                                 |  |
| OTHER : <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                       |                                                 |  |

|                                                    |               |                     |          |
|----------------------------------------------------|---------------|---------------------|----------|
| <b>DART AEROSPACE LTD</b>                          |               | <b>Work Order:</b>  | 144595   |
| <b>Description:</b> Co-Pilot Collective Head (212) |               | <b>Part Number:</b> | D5155-11 |
| <b>Inspection Dwg:</b> D5155                       | <b>Rev:</b> B | <b>Page 1 of 2</b>  |          |

### INSPECTION SHEET

| Drawing Dimension | Tolerance                | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|--------------------------|------------------|--------|--------|----------------------|----------|
| 2.800             | +0.010/-0.000            | 2.800            | —      |        | Vern MLO6            |          |
| 1.83              | +/-0.030                 | 1.830            | —      |        | "                    |          |
| R0.19             | +/-0.030                 | R.190            | —      |        | R-G                  |          |
| 21°               | +/-0.5°                  | 21°              | —      |        | C-Square             |          |
| 0.227             | +/-0.010                 | .2285            | —      |        | Vern MLO6            |          |
| 1.850             | +/-0.010                 | 1.845            | —      |        | "                    |          |
| Ø0.125 x 0.350    | +0.004/-0.001 x +/-0.010 | Ø.126 x .350     | —      |        | "                    |          |
| 21°               | +/-0.5°                  | 21°              | —      |        | C-Square             |          |
| 2.547             | +/-0.005                 | 2.547            | —      |        | Vern MLO6            |          |
| 0.35              | +/-0.030                 | .355             | —      |        | "                    |          |
| R0.25             | +/-0.030                 | R.250            | —      |        | R-G                  |          |
| 0.35              | +/-0.030                 | .345             | —      |        | Vern MLO6            |          |
| 0.06              | +/-0.030                 | .062             | —      |        | "                    |          |
| 0.33              | +/-0.030                 | .325             | —      |        | "                    |          |
| R0.25             | +/-0.030                 | R.250            | —      |        | R-G                  |          |
| 1.500             | +/-0.010                 | 1.500            | —      |        | Vern MLO6            |          |
| Ø0.150            | +0.005/-0.001            | Ø.153            | —      |        | "                    |          |
| 1.450             | +/-0.010                 | 1.450            | —      |        | "                    |          |
| R0.30             | +/-0.030                 | R.300            | —      |        | R-G                  |          |
| R0.03             | +/-0.030                 | R.030            | —      |        | "                    |          |
| 0.100             | +/-0.010                 | .098             | —      |        | Vern MLO6            |          |
| 3.000             | +/-0.010                 | 3.000            | —      |        | "                    |          |
| 0.59              | +/-0.030                 | .590             | —      |        | "                    |          |
| 1.82              | +/-0.030                 | 1.820            | —      |        | "                    |          |
| R0.30             | +/-0.030                 | R.300            | —      |        | R-G                  |          |
| R0.25             | +/-0.030                 | R.250            | —      |        | "                    |          |
| Ø0.150            | +0.005/-0.001            | Ø.153            | —      |        | Vern MLO6            |          |
| R0.25             | +/-0.030                 | R.250            | —      |        | R-G                  |          |
| 2.400             | +/-0.005                 | 2.400            | —      |        | Vern MLO6            |          |
| 0.300             | +/-0.010                 | .300             | —      |        | "                    |          |
| 1.450             | +/-0.010                 | 1.450            | —      |        | "                    |          |
| 1.750             | +/-0.010                 | 1.745            | —      |        | "                    |          |
| Ø0.150            | +0.005/-0.001            | Ø.153            | —      |        | "                    |          |
| 2.70              | +/-0.030                 | 2.699            | —      |        | "                    |          |
| 2.500             | +/-0.010                 | 2.500            | —      |        | "                    |          |
| 2.20              | +/-0.030                 | 2.200            | —      |        | "                    |          |
| R0.30             | +/-0.030                 | R.300            | —      |        | R-G                  |          |

|                                                    |  |                     |          |
|----------------------------------------------------|--|---------------------|----------|
| <b>DART AEROSPACE LTD</b>                          |  | <b>Work Order:</b>  | 144595   |
| <b>Description:</b> Co-Pilot Collective Head (212) |  | <b>Part Number:</b> | D5155-11 |
| <b>Inspection Dwg:</b> D5155 <b>Rev:</b> B         |  | <b>Page 2 of 2</b>  |          |

### INSPECTION SHEET

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|-----------|------------------|--------|--------|----------------------|----------|
| R0.25             | +/-0.030  | R.250            | —      |        | Hand Reel            |          |
| 0.70              | +/-0.030  | .700             | —      |        | Van M. 06            |          |
| 0.20              | +/-0.030  | .200             | —      |        | "                    |          |
| 4.700             | +/-0.010  | 4.700            | —      |        | "                    |          |
| 1.350             | +/-0.010  | 1.350            | —      |        | "                    |          |
|                   |           |                  |        |        |                      |          |
|                   |           |                  |        |        |                      |          |
|                   |           |                  |        |        |                      |          |
|                   | DAS       |                  |        |        |                      |          |

|                     |          |                    |          |                      |  |
|---------------------|----------|--------------------|----------|----------------------|--|
| <b>Measured by:</b> | T. 9-89  | <b>Checked by:</b> | S. 9-89  | <b>QC Inspector:</b> |  |
| <b>Date:</b>        | 16/05/11 | <b>Date:</b>       | 16/05/12 | <b>Date:</b>         |  |

|                                                |  |              |  |
|------------------------------------------------|--|--------------|--|
| <b>Engineering Approval:</b><br>(if necessary) |  | <b>Date:</b> |  |
|------------------------------------------------|--|--------------|--|

| Rev | Date     | Change                           | Revised by | Approved |
|-----|----------|----------------------------------|------------|----------|
| A   | 15.06.22 | New Issue                        | KJ         |          |
| B   | 16.01.20 | Dimensions updated per Dwg Rev B | KJ         |          |

D

PER MIL-A-8625F TYPE I OR IB OR IC OR II  
 AFTER WELDING  
 QSI 018 UNLESS OTHERWISE NOTED  
 OTHERWISE NOTED  
 005 TO 0.010 MAX  
 Y PER QSI 044 6.1

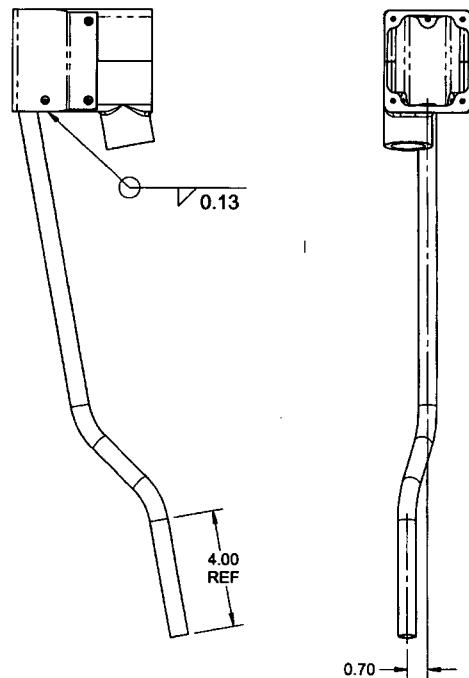


1604-2

A.P. 2015 JUL 02 ECN 15-577

APPROVED

| ITEM | QTY | P/N         | DESCRIPTION                             |
|------|-----|-------------|-----------------------------------------|
| 1    | X   | D5155-043   | CO-PILOT COLLECTIVE HEAD ASSEMBLY (212) |
| 2    | 1   | D4410-7     | CONDUIT                                 |
| 3    | 1   | D5155-3     | CO-PILOT COLLECTIVE HEAD (212)          |
| 4    | 1   | D5155-11    | CO-PILOT COLLECTIVE HEAD (212)          |
| 5    | 1   | D5156-11    | BACK PLATE                              |
| 6    | 11  | 90296A108   | HELI-COIL INSERT (6-32 X 0.276)         |
| 7    | 2   | MS16562-223 | SLOTTED SPRING PIN                      |
| 8    | 7   | MS24693-24B | SCREW, CSK 100°                         |

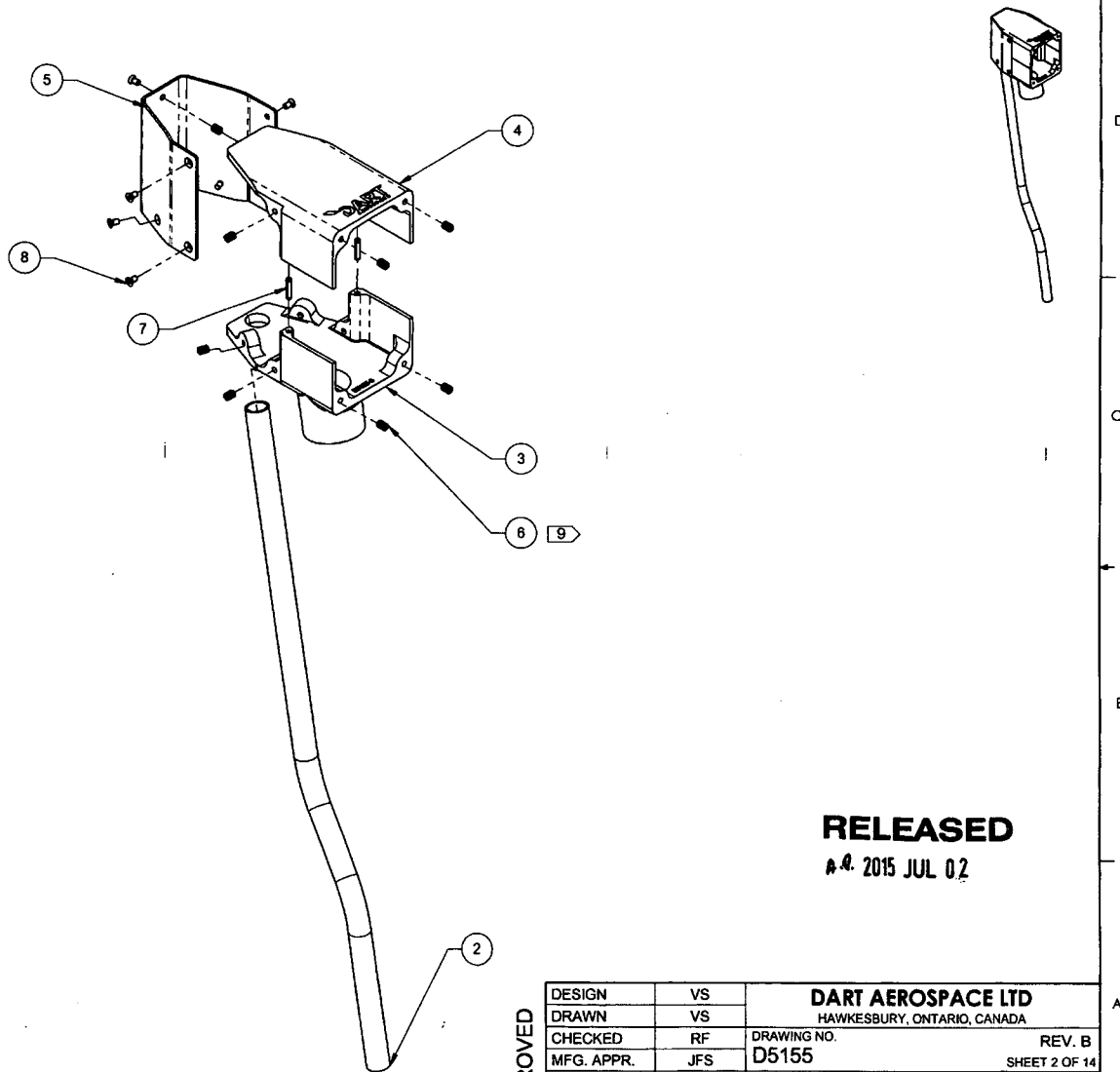


**D5155-043 WELDING DETAIL**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.20 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL AFTER ANODIZING

**D5155-043 CO-PILOT COLLECTIVE HEAD ASSY (212)**



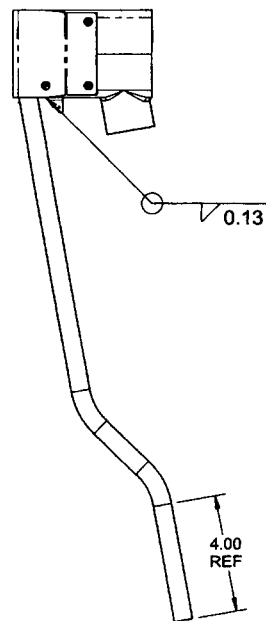
**RELEASED**

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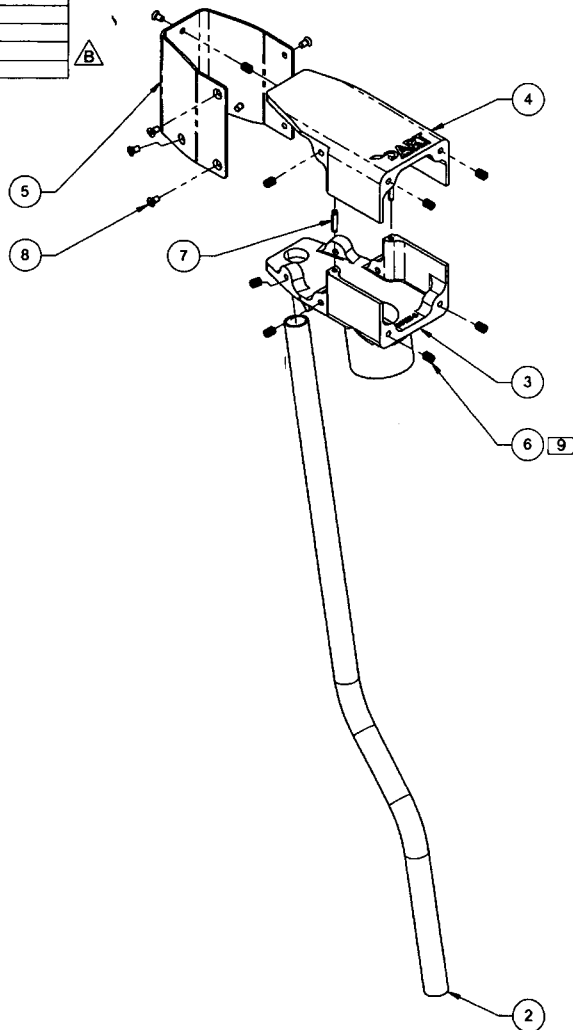
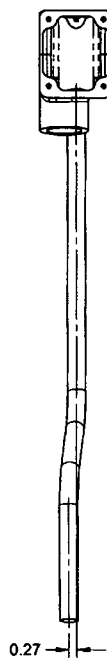
APPROVED

|            |          |                                                                                                                                                                                                                                                                                          |               |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     | VS       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                |               |
| DRAWN      | VS       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                              |               |
| CHECKED    | RF       | DRAWING NO.                                                                                                                                                                                                                                                                              | REV. B        |
| MFG. APPR. | JFS      | D5155                                                                                                                                                                                                                                                                                    | SHEET 2 OF 14 |
| APPROVED   | HS       | TITLE                                                                                                                                                                                                                                                                                    | SCALE         |
| DE APPR.   | DS       | CO-PILOT COLLECTIVE HEAD                                                                                                                                                                                                                                                                 | NTS           |
| DATE       | 15.05.21 | <small>COPYRIGHT © 2013 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |               |

| ITEM | QTY | P/N         | DESCRIPTION                                      |
|------|-----|-------------|--------------------------------------------------|
| 1    | X   | D5155-045   | CO-PILOT COLLECTIVE HEAD ASSEMBLY (EAGLE SINGLE) |
| 2    | 1   | D4410-7     | CONDUIT                                          |
| 3    | 1   | D5155-5     | CO-PILOT COLLECTIVE HEAD (EAGLE SINGLE)          |
| 4    | 1   | D5155-9     | CO-PILOT COLLECTIVE HEAD (205)                   |
| 5    | 1   | D5156-9     | BACK PLATE                                       |
| 6    | 11  | 90296A108   | HELI-COIL INSERT (6-32 X 0.276)                  |
| 7    | 2   | MS16562-223 | SLOTTED SPRING PIN                               |
| 8    | 7   | MS24693-24B | SCREW, CSK 100"                                  |



**D5155-045 WELDING DETAIL**



**D5155-045 CO-PILOT COLLECTIVE HEAD ASSY (EAGLE SINGLE)**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.06 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL AFTER ANODIZING

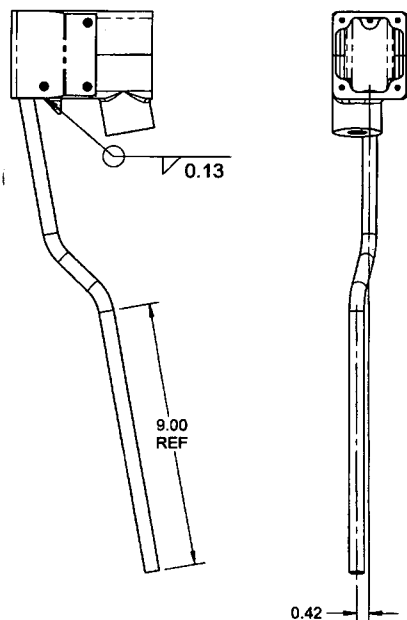
**RELEASED**

15 JUL 02

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|            |          |                                                                                                                                                                                                                                                                |               |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     | VS       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                       |               |
| DRAWN      | VS       |                                                                                                                                                                                                                                                                |               |
| CHECKED    | RF       | DRAWING NO. <b>D5155</b>                                                                                                                                                                                                                                       | REV. B        |
| MFG. APPR. | JFS      |                                                                                                                                                                                                                                                                | SHEET 3 OF 14 |
| APPROVED   | HS       | TITLE                                                                                                                                                                                                                                                          | SCALE         |
| DE APPR.   | DS       | <b>CO-PILOT COLLECTIVE HEAD</b>                                                                                                                                                                                                                                |               |
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| ITEM | QTY | P/N         | DESCRIPTION                       |
|------|-----|-------------|-----------------------------------|
| 1    | X   | D5155-047   | CO-PILOT COLLECTIVE HEAD ASSEMBLY |
| 2    | 1   | D5054-1     | CONDUIT                           |
| 3    | 2   | D5073-1     | SNAP RING                         |
| 4    | 1   | D5155-7     | CO-PILOT COLLECTIVE HEAD (205)    |
| 5    | 1   | D5155-9     | CO-PILOT COLLECTIVE HEAD (205)    |
| 6    | 1   | D5156-9     | BACK PLATE                        |
| 7    | 11  | 90296A108   | HELI-COIL INSERT (6-32 X 0.276)   |
| 8    | 2   | MS16562-223 | SLOTTED SPRING PIN                |
| 9    | 7   | MS24693-24B | SCREW, CSK 100°                   |
| 10   | 1   | MS27641-3   | BEARING                           |

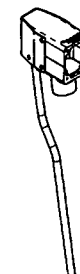
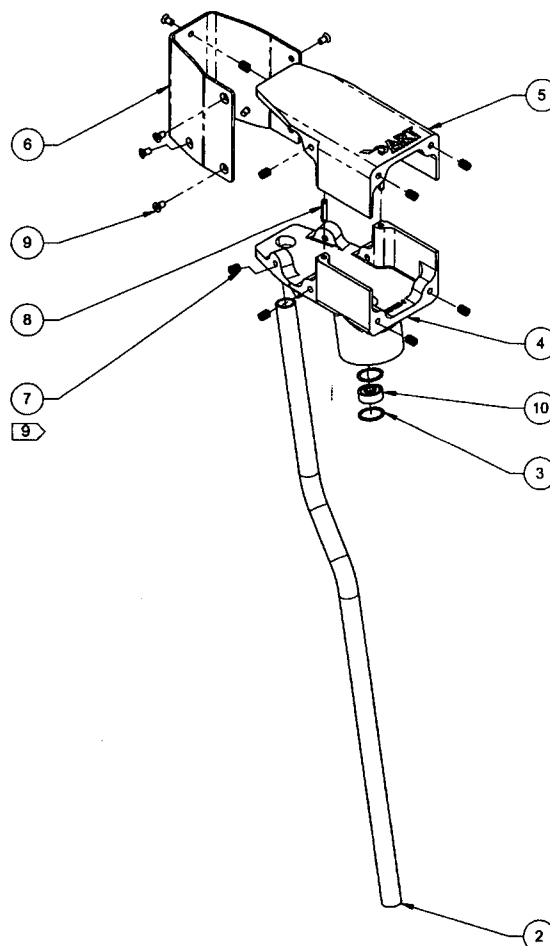


**D5155-047 WELDING DETAIL**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.14 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL AFTER ANODIZING

**D5155-047 CO-PILOT COLLECTIVE HEAD ASSY  
FOR 205 WITH 204-001-290-5 STICK AND THROTTLE ASSEMBLY INSTALLED**



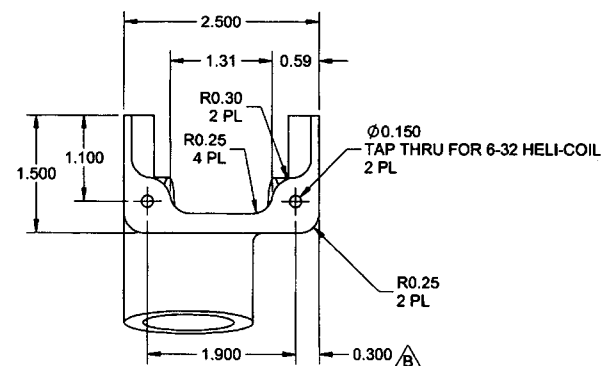
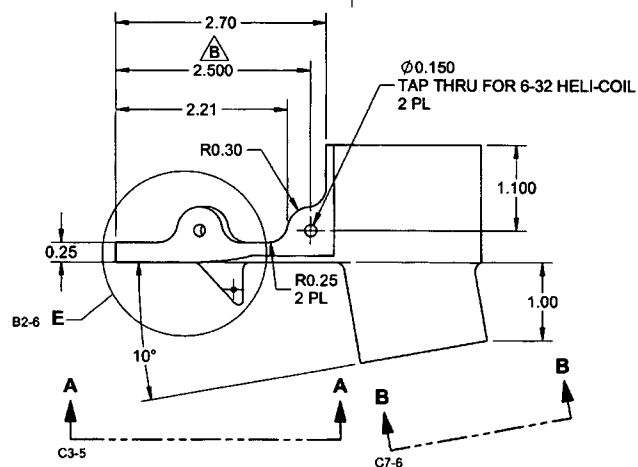
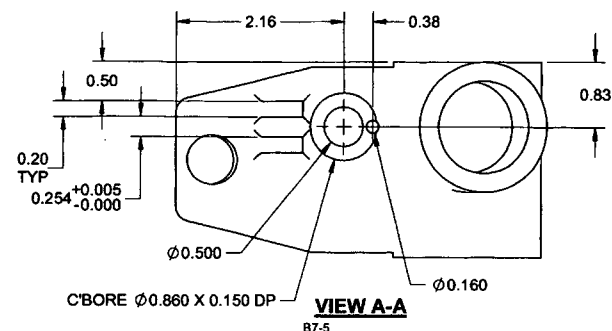
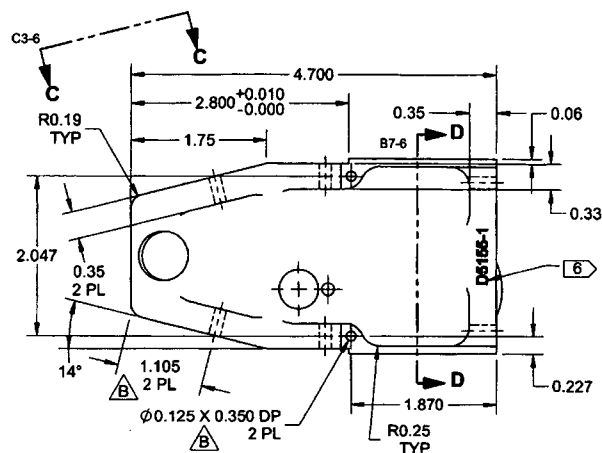
**RELEASED**

A-E 2015 JUL 02

APPROVED

|            |          |                                                                                                                                                                                                                                                                                |               |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     | VS       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                       |               |
| DRAWN      | VS       |                                                                                                                                                                                                                                                                                |               |
| CHECKED    | RF       | DRAWING NO.                                                                                                                                                                                                                                                                    | REV. B        |
| MFG. APPR. | JFS      | <b>D5155</b>                                                                                                                                                                                                                                                                   | SHEET 4 OF 14 |
| APPROVED   | HS       | TITLE                                                                                                                                                                                                                                                                          | SCALE         |
| DE APPR.   | DS       | <b>CO-PILOT COLLECTIVE HEAD</b>                                                                                                                                                                                                                                                | NTS           |
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0.2 2015 JUL 02

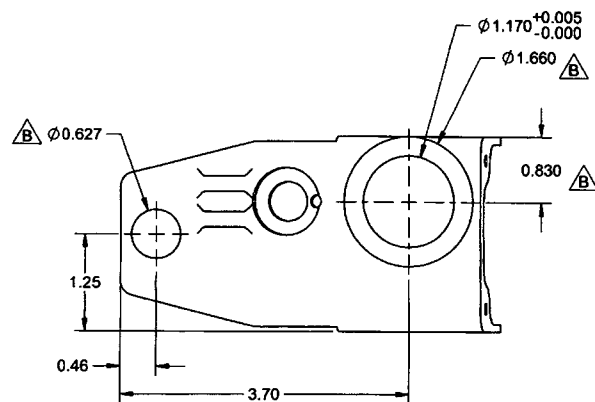
**NOTES:**

- 1) MATERIAL: 6061-T6/T651/T6511/T62 ALUMINUM BAR  
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221  
REF DART SPEC M6061T6B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3 IN THIS AREA TO MAX DEPTH  
OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 0.47 lbs
- 8) UNDIMENSIONED FEATURES ARE DEFINED BY D5155-1.SLDPRT

**D5155-1 CO-PILOT COLLECTIVE HEAD (205)**

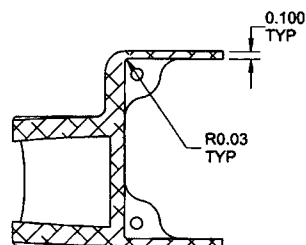
APPROVED

|                                                                                                                                                                                                                                 |          |                                        |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------|---------------|
| DESIGN                                                                                                                                                                                                                          | VS       | <b>DART AEROSPACE LTD</b>              |               |
| DRAWN                                                                                                                                                                                                                           | VS       | HAWKESBURY, ONTARIO, CANADA            |               |
| CHECKED                                                                                                                                                                                                                         | RF       | DRAWING NO.                            | REV. B        |
| MFG. APPR.                                                                                                                                                                                                                      | JFS      | D5155                                  | SHEET 5 OF 14 |
| APPROVED                                                                                                                                                                                                                        | HS       | TITLE                                  | SCALE         |
| DE APPR.                                                                                                                                                                                                                        | DS       | <b>#</b> CO-PILOT COLLECTIVE HEAD      | NTS           |
| DATE                                                                                                                                                                                                                            | 15.05.21 | COPYRIGHT © 2013 BY DART AEROSPACE LTD |               |
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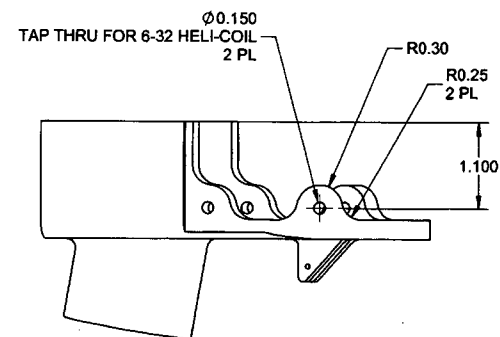
**VIEW B-B**

B5-5



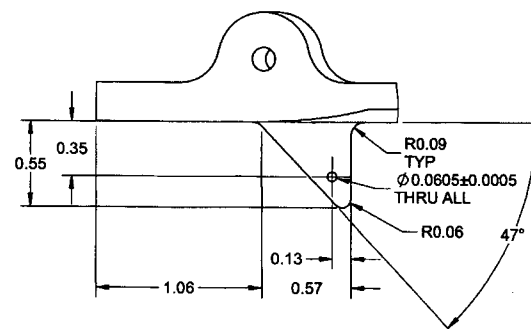
**SECTION D-D**

D6-5



**VIEW C-C**

D7-5



**DETAIL E**

B7-5

**RELEASED**

A.R. 2015 JUL 02

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

**D5155-1 CO-PILOT COLLECTIVE HEAD (205)**

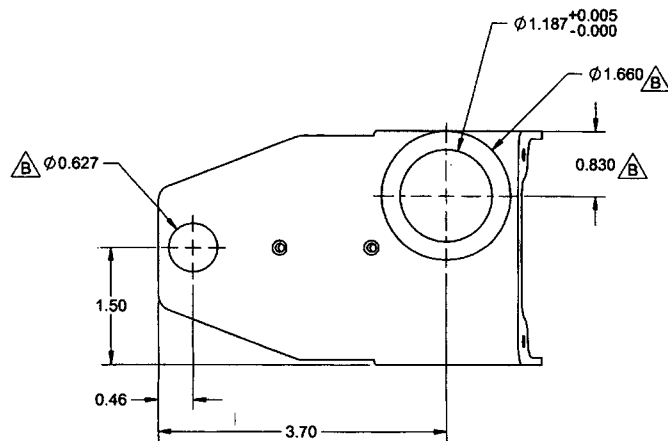
**DETAIL VIEWS**

APPROVED

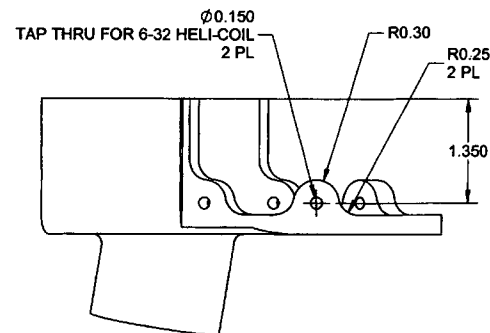
|            |          |                                                                                                                                                                                                                                                               |               |
|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     | VS       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                      |               |
| DRAWN      | VS       |                                                                                                                                                                                                                                                               |               |
| CHECKED    | RF       | DRAWING NO.                                                                                                                                                                                                                                                   | REV. B        |
| MFG. APPR. | JFS      | D5155                                                                                                                                                                                                                                                         | SHEET 6 OF 14 |
| APPROVED   | HS       | TITLE                                                                                                                                                                                                                                                         | SCALE         |
| DE APPR.   | DS       | CO-PILOT COLLECTIVE HEAD                                                                                                                                                                                                                                      | NTS           |
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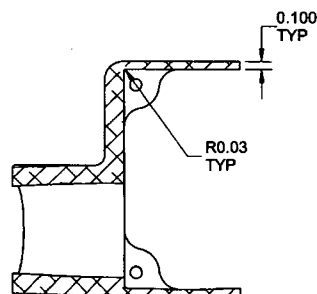
8 7 6 5 4 3 2 1



**VIEW G-G**  
B6-7



**VIEW H-H**  
D7-7



**SECTION I-I**  
D6-7

**RELEASED**  
A.O. 2015 JUL 02

- NOTES:**  
 1) MATERIAL: N/A  
 2) FINISH: N/A  
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
 4) UNITS: INCHES UNLESS OTHERWISE NOTED  
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
 6) IDENTIFICATION: N/A  
 7) WEIGHT: N/A

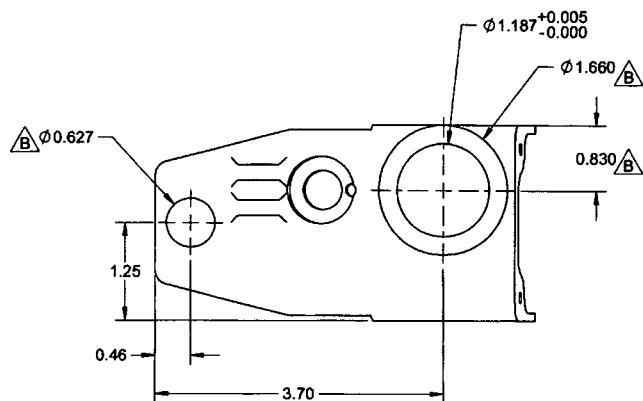
**D5155-3 CO-PILOT COLLECTIVE HEAD (212)**  
**DETAIL VIEWS**

APPROVED

|            |          |                                                                                                                                                                                                                                                                          |               |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     | VS       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                |               |
| DRAWN      | VS       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                              |               |
| CHECKED    | RF       | DRAWING NO.                                                                                                                                                                                                                                                              | REV. B        |
| MFG. APPR. | JFS      | D5155                                                                                                                                                                                                                                                                    | SHEET 8 OF 14 |
| APPROVED   | HS       | TITLE                                                                                                                                                                                                                                                                    | SCALE         |
| DE APPR.   | DS       | CO-PILOT COLLECTIVE HEAD                                                                                                                                                                                                                                                 | NTS           |
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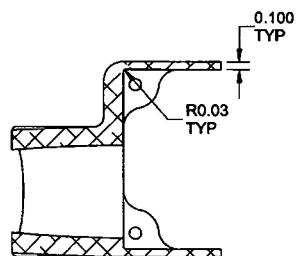
8 7 6 5 4 3 2 1





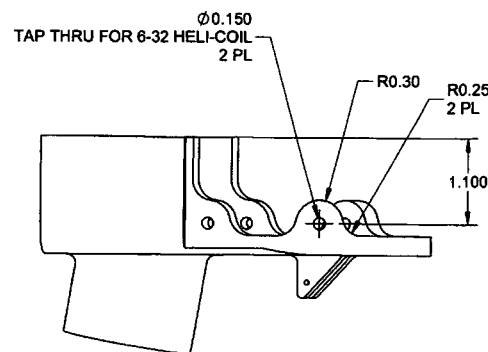
**VIEW K-K**

B6-9



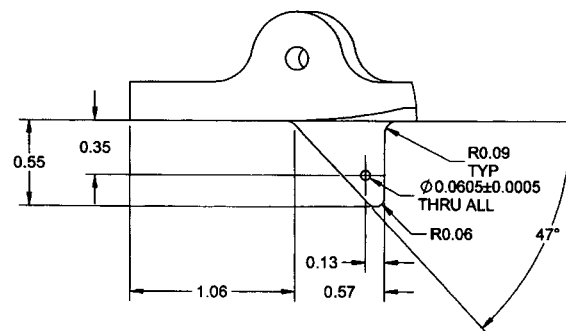
**SECTION M-M**

D6-9



**VIEW L-L**

D7-9



**DETAIL N**

B7-9

**RELEASED**

4.9. 2015 JUL 02

**NOTES:**

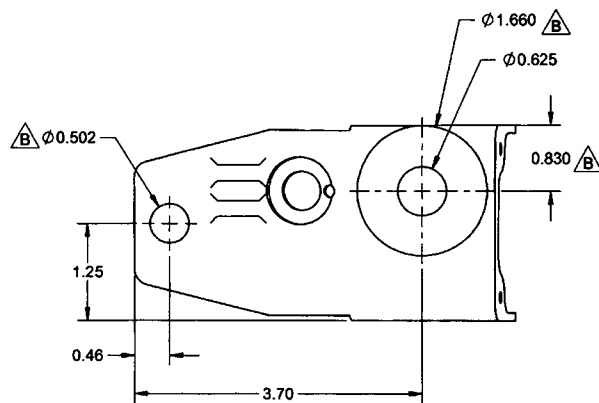
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

**D5155-5 CO-PILOT COLLECTIVE HEAD (EAGLE SINGLE)**  
**DETAIL VIEWS**

APPROVED

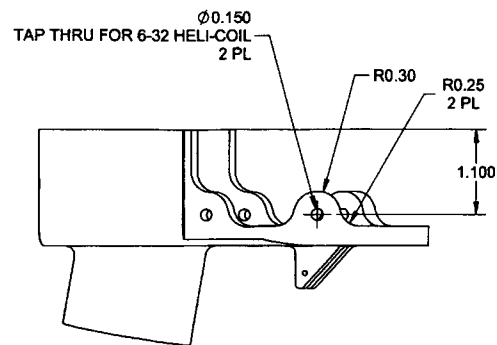
|            |          |                                                                                                                                                                                                                                                                                         |                |
|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| DESIGN     | VS       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                |                |
| DRAWN      | VS       |                                                                                                                                                                                                                                                                                         |                |
| CHECKED    | RF       | DRAWING NO.                                                                                                                                                                                                                                                                             | REV. B         |
| MFG. APPR. | JFS      | <b>D5155</b>                                                                                                                                                                                                                                                                            | SHEET 10 OF 14 |
| APPROVED   | HS       | TITLE                                                                                                                                                                                                                                                                                   | SCALE          |
| DE APPR.   | DS       | <b>CO-PILOT COLLECTIVE HEAD</b>                                                                                                                                                                                                                                                         | NTS            |
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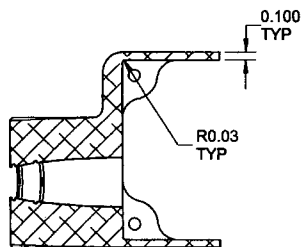
**VIEW P-P**

B5-11



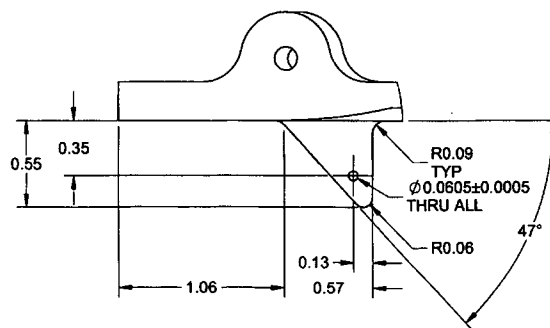
**VIEW Q-Q**

D7-11



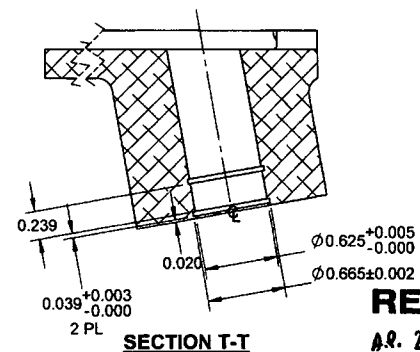
**SECTION R-R**

C6-11



**DETAIL S**

B6-11



**SECTION T-T**

B2-11

**RELEASED**  
A.R. 2015 JUL 02

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

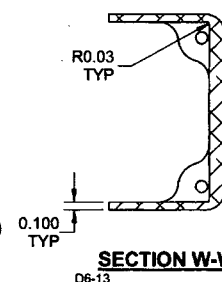
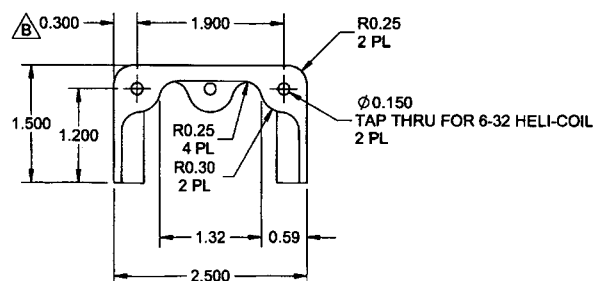
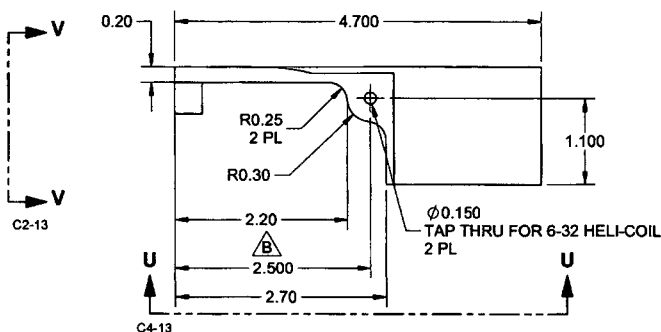
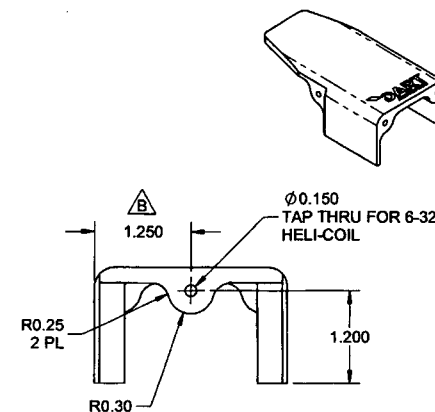
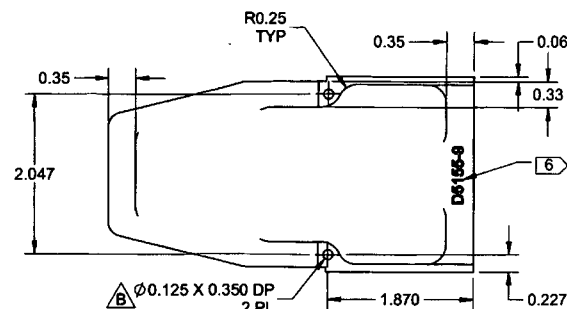
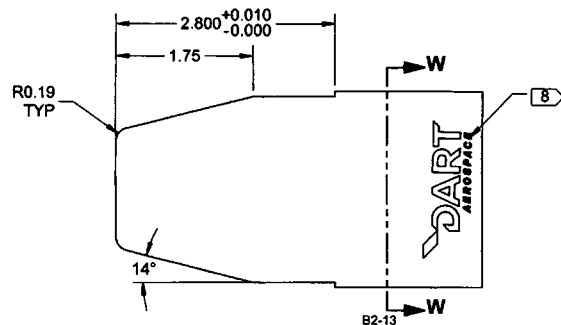
**D5155-7 CO-PILOT COLLECTIVE HEAD (205)**

**DETAIL VIEWS**

APPROVED

|                                                                                                                                                                                                                                |          |                                        |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------|----------------|
| DESIGN                                                                                                                                                                                                                         | VS       | <b>DART AEROSPACE LTD</b>              |                |
| DRAWN                                                                                                                                                                                                                          | VS       | HAWKESBURY, ONTARIO, CANADA            |                |
| CHECKED                                                                                                                                                                                                                        | RF       | DRAWING NO.                            | REV. B         |
| MFG. APPR.                                                                                                                                                                                                                     | JFS      | <b>D5155</b>                           | SHEET 12 OF 14 |
| APPROVED                                                                                                                                                                                                                       | HS       | TITLE                                  | SCALE          |
| DE APPR.                                                                                                                                                                                                                       | DS       | <b>CO-PILOT COLLECTIVE HEAD</b>        | NTS            |
| DATE                                                                                                                                                                                                                           | 15.05.21 | COPYRIGHT © 2013 BY DART AEROSPACE LTD |                |
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# NOTES:

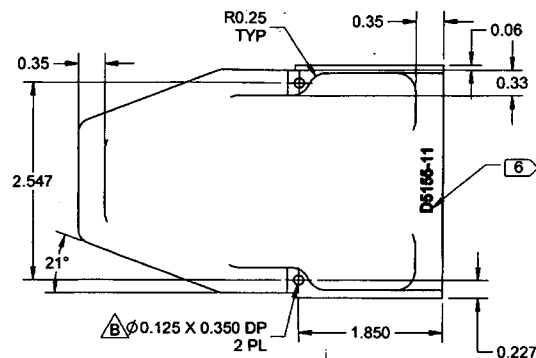
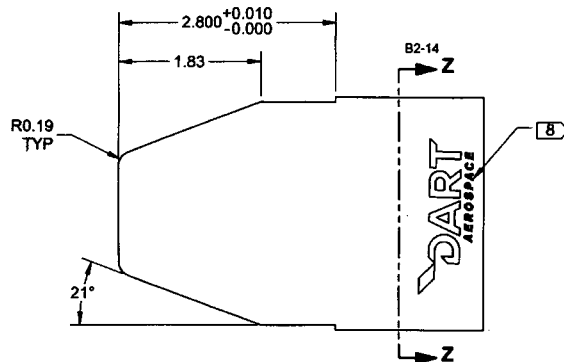
- 1) MATERIAL: 6061-T6/T651/T6511/T62 ALUMINUM BAR  
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4180)  
OR ASTM B211 OR ASTM B221  
REF DART SPEC M6061T6B
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II  
OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3 IN THIS AREA TO MAX DEPTH  
OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 0.31 lbs
- 8) ENGRAVE "DART" LOGO AS SHOWN 0.003-0.005 DP
- 9) UNDIMENSIONED FEATURES DEFINED BY D5155-9.SLDPRT

## D5155-9 CO-PILOT COLLECTIVE HEAD (205)

RELEASED  
4.8.2015 JUL 02

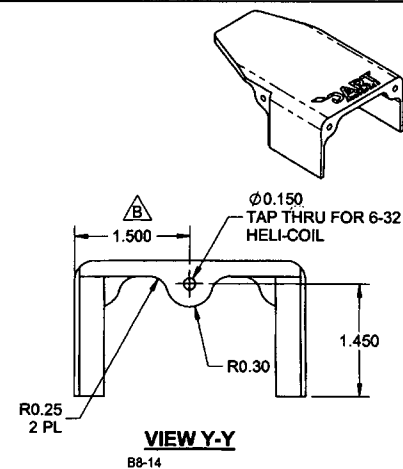
APPROVED

|            |          |                                                                                                                                                                                                                                                                                |                |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| DESIGN     | VS       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                       |                |
| DRAWN      | VS       |                                                                                                                                                                                                                                                                                |                |
| CHECKED    | RF       | DRAWING NO.                                                                                                                                                                                                                                                                    | REV. B         |
| MFG. APPR. | JFS      | <b>D5155</b>                                                                                                                                                                                                                                                                   | SHEET 13 OF 14 |
| APPROVED   | HS       | TITLE                                                                                                                                                                                                                                                                          | SCALE          |
| DE APPR.   | DS       | <b>CO-PILOT COLLECTIVE HEAD</b>                                                                                                                                                                                                                                                | NTS            |
| DATE       | 15.05.21 | COPYRIGHT © 2013 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE LTD. |                |



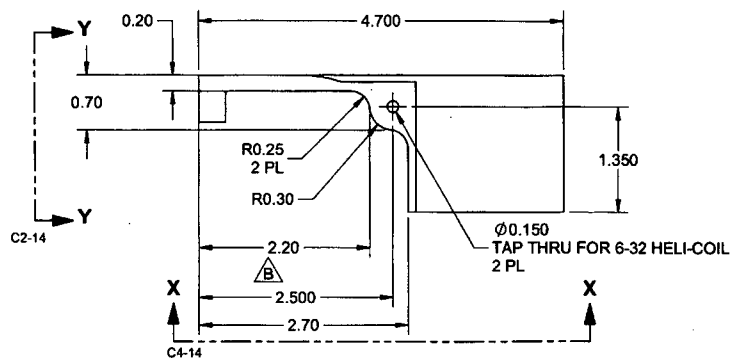
VIEW X-X

B6-14

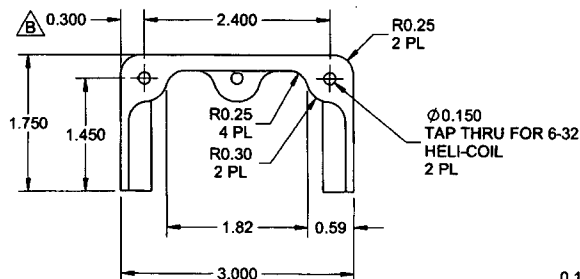


VIEW Y-Y

B8-14



C2-14



D6-14

SECTION Z-Z

D6-14

RELEASED

4.8. 2015 JUL 02

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6511/T62 ALUMINUM BAR  
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221  
REF DART SPEC M6061T6B
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II  
OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3 IN THIS AREA TO MAX DEPTH  
OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 0.36 lbs
- 8) ENGRAVE "DART" LOGO AS SHOWN 0.003-0.005 DP
- 9) UNDIMENSIONED FEATURES DEFINED BY D5155-11.SLDPRT

D5155-11 CO-PILOT COLLECTIVE HEAD (212)

APPROVED

|            |          |
|------------|----------|
| DESIGN     | VS       |
| DRAWN      | VS       |
| CHECKED    | RF       |
| MFG. APPR. | JFS      |
| APPROVED   | HS       |
| DE APPR.   | DS       |
| DATE       | 15.05.21 |

|                                                                                                                                                                                                                                                                                |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                              |              |
| DRAWING NO.<br>D5155                                                                                                                                                                                                                                                           | REV. B       |
| TITLE<br>CO-PILOT COLLECTIVE HEAD                                                                                                                                                                                                                                              | SCALE<br>NTS |
| COPYRIGHT © 2013 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO32413**

Purchase Order Date 5/18/2016

PO Print Date 5/19/2016

Page Number 1 of 4

Order From :  
A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

MAY 19 2016

**E-MAILED**

Contact Name  
Vendor Phone 613-446-4544

Ship To Contact  
Ship To Phone

Ship Via: VENDOR'S TRUCK  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB FCA - (Free Carrier)

| Line Nbr                                                                      | Reference<br>Vendor Part Number<br>Line Comments<br>Delivery Comments | Description/<br>Mfg ID       | Req Date/<br>Taxable<br>Promise Date | CD | Req Qty/<br>Unit of<br>Measure | PO Unit Price | Extended<br>Price |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------|--------------------------------------|----|--------------------------------|---------------|-------------------|
| 1                                                                             | 144951                                                                | D5155-043 CO-PILOT<br>REV. B | 5/24/2016<br>Yes<br>5/24/2016        |    | 3.00                           | \$3.47        | \$10.41           |
| FINISH: Black Anodize per MIL-A-8625F Type I or IB or IC or II or IIB Class 2 |                                                                       |                              |                                      |    |                                |               |                   |
| RUSH ORDER REQUIRE ON TUESDAY MAY, 24 OR BEFORE                               |                                                                       |                              |                                      |    |                                |               |                   |
| Line Total:                                                                   |                                                                       |                              |                                      |    |                                |               | \$10.41           |
| 2                                                                             | 143501                                                                | D5156-9 BACK PLATE<br>REV. B | 5/24/2016<br>Yes<br>5/24/2016        |    | 15.00                          | \$3.47        | \$52.05           |
| FINISH: Black Anodize per MIL-A-8625F Type I or IB or IC or II or IIB Class 2 |                                                                       |                              |                                      |    |                                |               |                   |
| RUSH ORDER REQUIRE ON TUESDAY MAY, 24 OR BEFORE                               |                                                                       |                              |                                      |    |                                |               |                   |
| Line Total:                                                                   |                                                                       |                              |                                      |    |                                |               | \$52.05           |

Note:

5/19/2016



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO32413**

Purchase Order Date 5/18/2016

PO Print Date 5/19/2016

Page Number 2 of 4

**Order From :**

VC-ATG001

**Ship To :** DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 613-446-4544

**Ship To Contact**

**Ship To Phone**

**Ship Via:** VENDOR'S TRUCK

**Ship Acct:**

**Buyer**

**Customer POID**

**Customer Tax #**

**Terms**

**Currency**

**FOB**

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

|   |        |                              |           |       |   |        |         |
|---|--------|------------------------------|-----------|-------|---|--------|---------|
| 3 | 145840 | D5156-5 FACE PLATE<br>REV. B | 5/24/2016 | 10.00 | ✓ | \$3.47 | \$34.70 |
|---|--------|------------------------------|-----------|-------|---|--------|---------|

Yes

5/24/2016

FINISH: Black Anodize per MIL-A-8625F Type I or IB or IC or II or IIB Class 2

RUSH ORDER REQUIRE ON TUESDAY MAY, 24 OR BEFORE

**Line Total:** \$34.70

|   |        |                             |           |      |   |        |         |
|---|--------|-----------------------------|-----------|------|---|--------|---------|
| 4 | 144595 | D5155-11 CO-PILOT<br>REV. B | 5/24/2016 | 8.00 | ✓ | \$3.48 | \$27.84 |
|---|--------|-----------------------------|-----------|------|---|--------|---------|

Yes

5/24/2016

FINISH: Black Anodize per MIL-A-8625F Type I or IB or IC or II or IIB Class 2

RUSH ORDER REQUIRE ON TUESDAY MAY, 24 OR BEFORE

**Line Total:** \$27.84

|   |        |                              |           |       |   |         |          |
|---|--------|------------------------------|-----------|-------|---|---------|----------|
| 5 | 142624 | 646.3311 RH HALF REV.<br>N/C | 5/27/2016 | 12.00 | ✓ | \$18.10 | \$217.20 |
|---|--------|------------------------------|-----------|-------|---|---------|----------|

Yes

5/27/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

**Note:**

5/19/2016



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO32413**

Purchase Order Date 5/18/2016

PO Print Date 5/19/2016

Page Number 3 of 4

**Order From :**

VC-ATG001

**Ship To :** DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 613-446-4544

**Ship To Contact**

**Ship To Phone**

**Ship Via:** VENDOR'S TRUCK

**Ship Acct:**

**Buyer**

**Customer POID**

**Customer Tax #**

**Terms**

**Currency**

**FOB**

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

**Line Total: \$217.20**

|   |        |                                    |           |       |       |          |
|---|--------|------------------------------------|-----------|-------|-------|----------|
| 6 | 144768 | 647.3910 UPPER<br>DEFLECTOR REV. C | 5/27/2016 | 12.00 | 12.05 | \$144.60 |
|---|--------|------------------------------------|-----------|-------|-------|----------|

Yes

5/27/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

**Line Total: \$144.60**

|   |          |                                |           |      |        |        |
|---|----------|--------------------------------|-----------|------|--------|--------|
| 7 | 71401-45 | PROCUREMENT<br>QUALITY CLAUSES | 5/24/2016 | 1.00 | \$0.00 | \$0.00 |
|---|----------|--------------------------------|-----------|------|--------|--------|

No

5/24/2016

**Procurement Quality Clauses**

A004 FAA-PMA /TSO

A005 RIGHT OF ENTRY

A016 PERSONNEL QUALIFICATION

A024 PROCESS CERTIFICATIONS

A025 CERTIFICATE OF CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

**Line Total: \$0.00**

**Note:**

5/19/2016



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO32413**

Purchase Order Date 5/18/2016

PO Print Date 5/19/2016

Page Number 4 of 4

**Order From :**

VC-ATG001

**Ship To :** DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 613-446-4544

**Ship To Contact**

**Ship To Phone**

**Ship Via:** VENDOR'S TRUCK

**Ship Acct:**

**Buyer**

**Customer POID**

**Customer Tax #**

**Terms**

**Currency**

**FOB**

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

|   |          |           |           |      |          |          |
|---|----------|-----------|-----------|------|----------|----------|
| 8 | 71401-45 | ADMIN FEE | 5/24/2016 | 1.00 | \$150.00 | \$150.00 |
|   |          |           | No        |      |          |          |
|   |          |           | 5/24/2016 |      |          |          |

**Line Total:** \$150.00

**PO Total:** \$636.80

**Note:** Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr: 2

Change Date: 5/19/2016

## Chantal Lavoie

---

**From:** Roger Lebel <rlebel@atgindustries.com>  
**Sent:** Thursday, May 19, 2016 2:11 PM  
**To:** Chantal Lavoie  
**Subject:** RE: PO32320

Salut Chantal,

Here's your  
quote,

| Part Number | Qty | Requirement                | Unit<br>Cost |
|-------------|-----|----------------------------|--------------|
| D5155-043   | 3   | BLACK ANODIZE              | \$3.47       |
| D5156-9     | 15  | BLACK ANODIZE              | \$3.47       |
| D5156-5     | 10  | BLACK ANODIZE              | \$3.47       |
| D5155-11    | 8   | BLACK ANODIZE              | \$3.48       |
| 646.3311    | 12  | HARD ANO BLACK &<br>PRIMER | \$18.10      |
| 646.3311    | 12  | HARD ANO BLACK &<br>primer | \$12.05      |
| ADMIN       | 1   |                            | \$150.00     |

They should be ready for the 24th or earlier.

Merci!

**Thank you/Merci!**

---

### Roger Lebel

Manager, Anodizing, & Painting Department  
Director, Human Resources  
[www.ATGIndustries.com](http://www.ATGIndustries.com)  
Email: [rlebel@atgindustries.com](mailto:rlebel@atgindustries.com)  
Phone: (613) 446-4544  
Fax: (613) 446-4556

---

**From:** Chantal Lavoie [[clavoie@dartaero.com](mailto:clavoie@dartaero.com)]  
**Sent:** Thursday, May 19, 2016 7:46 AM  
**To:** Roger Lebel  
**Subject:** RE: PO32320

Sure thing .

Thank you,  
Chantal

**From:** Roger Lebel [mailto:rlebel@atgindustries.com]  
**Sent:** Thursday, May 19, 2016 6:40 AM  
**To:** Chantal Lavoie <clavoie@dartaero.com>  
**Subject:** PO32320

Salut Chantal,

Is it Ok if you receive PO32320 tomorrow morning? They are being painted right now. Someone can come to pick them up this afternoon but we usually wait 24 hours to let them dry appropriately.

Sorry about this.

Marc-André

**Thank you/Merci!**

---

**Roger Lebel**  
Manager, Anodizing, & Painting Department  
Director, Human Resources  
[www.ATGIndustries.com](http://www.ATGIndustries.com)  
Email: [rlebel@atgindustries.com](mailto:rlebel@atgindustries.com)  
Phone: (613) 446-4544  
Fax: (613) 446-4556

---

**From:** Chantal Lavoie [clavoie@dartaero.com]  
**Sent:** Wednesday, May 18, 2016 1:41 PM  
**To:** Roger Lebel  
**Subject:** NEW PO32413

Good afternoon Roger,  
Please see attached for new po32413, Steven drop off the parts this morning.  
Please advise if possible to get line #1,2,3,4, for next Tuesday May, 24.  
Thanks  
Chantal

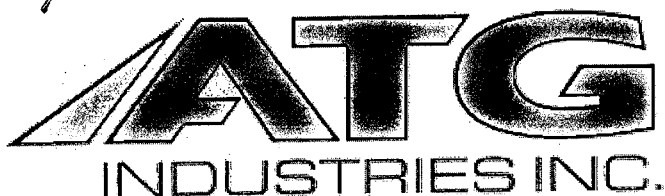
**Chantal Lavoie**  
*Purchasing Coordinator*

**DART AEROSPACE**  
T 1 613 632-5200  
F 1 613 632-1053  
E [clavoie@dartaero.com](mailto:clavoie@dartaero.com)  
1 800 556- 4166  
[www.dartaerospace.com](http://www.dartaerospace.com)

**DART**  
AEROSPACE

**DART**  
AEROSPACE





A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE STREET  
ROCKLAND, ON K4K 1T2  
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

### Pack List

Number: 911717

Date: 20-May-16

#### To

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury, ON K6A 1K7

#### Ship To

CHANTAL LAVOIE  
Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

| Terms                            |                                                                                                                                            | Ship Via                |         |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------|
| Quantity                         | Description                                                                                                                                |                         |         |
|                                  | PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT.<br>IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544. |                         |         |
| 3<br>ea                          | Part: D5155-043<br>CO-PILOT<br>Job: 19533                                                                                                  | Rev: B<br>PO: PO32413   | Line: 1 |
| 15<br>ea                         | Part: D5156-9<br>Back Plate<br>Job: 19534                                                                                                  | Rev: B<br>PO: PO32413   | Line: 2 |
| 10<br>ea                         | Part: D5156-5<br>Face Plate<br>Job: 19535                                                                                                  | Rev: B<br>PO: PO32413   | Line: 3 |
| 8<br>ea                          | Part: D5155-11<br>Co-Pilot<br>Job: 19536                                                                                                   | Rev: B<br>PO: PO32413   | Line: 4 |
| 12<br>ea                         | Part: 646.3311<br>RH Half<br>Job: 19537                                                                                                    | Rev: N/C<br>PO: PO32413 | Line: 5 |
| 12<br>ea                         | Part: 647.3910<br>Upper Deflector<br>Job: 19538                                                                                            | Rev: C<br>PO: PO32413   | Line: 6 |
| 1<br>ea                          | Part: ADMINISTRATION FEE<br>ADMINISTRATION FEE<br>Job: 19539                                                                               | Rev: 161<br>PO: PO32413 | Line: 8 |
| DATE: 20/5/16                    |                                                                                                                                            |                         |         |
| CERTIFIED SIGNATURE: [Signature] |                                                                                                                                            |                         |         |

MAY 24 2016